

**WHAT IS CLAIMED IS:**

1. An in-flight communications system, comprising:  
an aircraft cabin envelope including a wireless LAN;  
an ACARS security envelope that is in communication with the wireless LAN via an airborne communications management unit (CMU); and  
a ground based security envelop that is in communication with a ground-based segment of the ACARS security envelope.
2. The system of claim 1, further comprising a personal digital assistant (PDA) having a wireless modem that operates in conjunction with the wireless LAN.
3. The system of claim 1, wherein the wireless LAN supports a plurality of wireless devices.
4. The system of claim 1, wherein the ACARS security envelope comprises a datalink service provider that is linked to the ground based security envelope.
5. The system of claim 1, wherein an authorized user operates within the aircraft cabin security envelope.
6. The system of claim 5, wherein the authorized user communicates with an operations center within the ground-based security envelope.

7. The system of claim 5, wherein the authorized user communicates with flight deck personnel on the same aircraft.

8. The system of claim 5, wherein the authorized user communicates with another Air Marshal on the same aircraft.

9. An in-flight communications system, comprising:  
a personal digital assistant (PDA) device having wireless communications capabilities;  
an aircraft cabin wireless local area network (LAN), the PDA device being operable to be in communication with the wireless LAN;  
a communications management unit (CMU) associated with the wireless LAN and operable to send and received data via ACARS; and  
an operations center operable to receive data generated by the PDA, transmitted over the wireless LAN and passed to the operations center via ACARS.

10. The system of claim 9, wherein the CMU provides PDA generated data to flight deck personnel.

11. The system of claim 9, wherein the PDA device is programmed with predetermined screens.

12. The system of claim 11, wherein the screens are arranged to have tap and send functionality.

13. The system of claim 9, wherein the PDA device is operable to communicate with another PDA device over the wireless LAN.

14. A method of sending a message from an air borne aircraft, comprising:  
composing a message on a PDA device;  
transmitting the message from the PDA device over an aircraft cabin wireless network to a communications management unit (CMU);  
encrypting the message to create an encrypted message;  
sending the encrypted message via an ACARS network;  
receiving the encrypted message at a datalink service provider;  
forwarding the encrypted message to an operations center; and  
decrypting the encrypted message to obtain the message.

15. The method of claim 14, wherein the step of composing a message comprises using predefined message structures.

16. The method of claim 14, wherein the wireless network is based on a protected IEEE 802.11(b) protocol.

17. The method of claim 14, wherein the step of encrypting is performed by the CMU.

18. The method of claim 14, wherein the message is displayed for the flight deck personnel.

19. The method of claim 14, further comprising communicating with other PDA devices on the same aircraft.

20. The method of claim 14, further comprising sending a message from the operations center to a PDA device in an airborne aircraft.

21. A method of sending a message from an air borne aircraft, comprising:  
composing a message on a PDA device;  
encrypting the message to create an encrypted message;  
transmitting the encrypted message from the PDA device over an aircraft cabin wireless network to a communications management unit (CMU);  
sending the encrypted message via an ACARS network;  
receiving the encrypted message at a datalink service provider;  
forwarding the encrypted message to an operations center; and  
decrypting the encrypted message to obtain the message.

22. The method of claim 21, wherein the step of composing a message comprises using predefined message structures.

23. The method of claim 21, wherein the wireless network is based on an IEEE 802.11(b) protocol.

24. The method of claim 21, wherein the step of encrypting is performed by the PDA.

25. The method of claim 21, further comprising communicating with other PDA devices on the same aircraft.

26. The method of claim 21, further comprising sending a message from the operations center to a PDA device in an airborne aircraft.

27. An in-flight communications system, comprising:

a personal digital assistant (PDA) device having wireless communications capabilities;

an aircraft cabin wireless local area network (LAN), the PDA device being operable to be in communication with the wireless LAN;

a communications module associated with the wireless LAN and operable to send and receive data via an air-to-ground communications system; and

an operations center operable to receive data generated by the PDA, transmitted over the wireless LAN and passed to the operations center via the air-to-ground communications system.

28. The system of claim 27, wherein the communications module comprises a communications management unit (CMU).

29. The system of claim 27, wherein the air-to-ground communications system comprises an ACARS.

30. The system of claim 27, wherein the communications module provides PDA generated data to flight deck personnel.

31. The system of claim 27, wherein the PDA device is programmed with predetermined screens.

32. The system of claim 31, wherein the screens are arranged to have tap and send functionality.

33. The system of claim 27 wherein the PDA device is operable to communicate with another PDA device over the wireless LAN.